THE STATE OF ARTHRITIS IN MICHIGAN



Michigan Department of Community Health Arthritis Foundation Michigan Chapter University of Michigan Rheumatology Program

The State of Arthritis in Michigan

Michigan Department of Community Health Arthritis Foundation Michigan Chapter University of Michigan Rheumatology Program

July, 2004

This publication was supported by Grant Number U58/CCU522826-1-0 from the Centers for Disease Control and Prevention to the Michigan Department of Community Health. Its contents are solely the responsibility of the Michigan Department of Community Health and do not necessarily represent the official views of the Centers for Disease Control.

The State of Arthritis in Michigan Table of Contents

Introduction	1
What is Arthritis?	
Most Common Forms of Arthritis	.2
Who Has Arthritis?	
Gender	5
Ethnicity	. 5
Income	. 6
How Does Arthritis Impact Michigan?	
Cost	7
How Does Arthritis Impact People?	
Physical Health Interferes with Work	8
Physical Limitations	9
Severe Pain	10
Exercise	10
What Do People Know About Arthritis?	11
How is Arthritis Being Managed?	12
Michigan Arthritis Initiative	13
Michigan Arthritis Programs • Arthritis Foundation Michigan Chapter	
Arthritis Exercise Classes	17
Arthritis Self-Help Course	18
University of Michigan Rheumatic Disease Core Center	19
Arthritis Resources	21
References	23
Technical Notes	24

INTRODUCTION

Executive Summary

Arthritis is among the most common chronic conditions in the United States. It is the nation's leading cause of disability. Over 3 million Michigan citizens have some form of arthritis or joint symptoms, including about 7,000 children. The majority of adults with arthritis are under the age of 65. Arthritis can impact all areas of a person's life – family, work and community involvement. Michigan is beginning to take note of the tremendous effects of this condition – on individuals, and on the state as a whole. Direct medical costs for arthritis-related care in Michigan were estimated to exceed \$2.2 billion as of 1997 (the latest year for which data is available). That same year, arthritis cost Michigan citizens with arthritis age 18-64 years an estimated \$1.5 billion in lost earnings.

The psychological and social costs of arthritis are harder to measure. People with arthritis are more likely to report only fair or poor health than people without arthritis. They also are more likely to have health problems that interfere with work, regular activity and social activity.

Although the causes of more than 100 forms of arthritis are varied and sometimes unknown, much can be done to relieve the burden of arthritis. Many people who have used arthritis exercise and self-help programs available in Michigan attest to the benefits they have gained in their health and sense of well-being. See pages 13-20 for an overview of the Michigan Arthritis Initiative and Michigan Arthritis Programs.

Sources of Information

The information presented in this report comes mainly from the Michigan Osteoporosis and Arthritis Behavior Risk Factor Survey (MOABRFS), a random-digit-dialed telephone survey of English-speaking, non-institutionalized Michigan adults 18 years and older, completed in 2001. See Technical Note 1. Technical Notes about survey methods are at the end of this report.



The purpose of the survey was to gain Michigan-specific data about:

- Who has arthritis
- How arthritis impacts people
- How much people know about arthritis
- How arthritis is being managed by health care providers

Additional sources of data were utilized to assess the impact of arthritis on society:

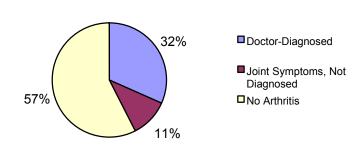
- Michigan Inpatient Hospital Data Base (Michigan Inpatient Resident File)
- Michigan Occupational Disease Reports
- Centers for Disease Control and Prevention national facts and figures
- The Arthritis Foundation Michigan Chapter program data documenting how many people in Michigan are engaged in arthritis self-management activities

WHAT IS ARTHRITIS?

Arthritis is a term that refers to a group of over 100 diseases and conditions that primarily affect the joints, surrounding tissues (muscles and fascia) and other connective tissues (tendons and ligaments). Arthritis symptoms primarily include pain, stiffness, loss of movement and sometimes swelling of joints and tissues. These conditions can lead to limitations in work, recreation and usual daily activities. Joint involvement is the most characteristic aspect of arthritis, but some arthritic conditions can also result in serious complications such as kidney disease, blindness and premature death.

It is estimated that about four in ten adults in Michigan have arthritis or joint symptoms. This translates to about 3 million adults, including 2.3 million who have been told by a doctor that they have arthritis, and also 800,000 people who have chronic joint symptoms but who have not yet been diagnosed by a physician.²

43% of Michigan Adults Have Arthritis



Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey 2000-2001

Most Common Forms of Arthritis in Michigan

Definition of Arthritis

For this report, a person was considered to have arthritis if he or she met at least one of the following criteria:

- 1) Responded "yes" to the questions, "During the past 12 months, have you had pain, aching, stiffness, or swelling in or around a joint?" and "Were these symptoms present on most days for at least one month?"
- 2) Reported that a diagnosis of "arthritis" had been received from a doctor.
- 3) Responded "yes" when asked, "Has a doctor ever told you that you have any of the following conditions: gout, lupus, fibromyalgia, scleroderma, rheumatism, or Lyme disease?"

See Technical Note 2.

Among Michigan adults who have been told by a doctor that they have arthritis, the most common types of arthritis reported are osteoarthritis, gout, rheumatoid arthritis, fibromyalgia, lupus, scleroderma, and Lyme disease. By far the largest reported category of arthritis, however, is "diagnosis unknown." Almost 60 percent of Michigan adults who had been told by a doctor that they have arthritis did not know which type of arthritis they have. See Technical Note 3.

WHAT IS ARTHRITIS?

Michigan's Most Common Forms of Arthritis

Osteoarthritis is a degenerative joint disease. It most often affects the hip, knee, foot, and hand – but can affect other joints as well. Pain, stiffness, movement problems and activity limitations can result from a breakdown of the joint cartilage and changes in underlying bone and supporting tissues.

Gout is a condition that causes sudden, severe attacks of pain and tenderness, redness, warmth and swelling in joints – usually in smaller joints. It results from deposits of needle-like crystals of uric acid, a byproduct of the breakdown of purines or waste products, in connective tissue, joint spaces or both.

Rheumatoid Arthritis (RA) is an autoimmune disorder characterized by persistent inflammation of the joint linings and, in some cases, the internal organs as well. The chronic inflammation of the joint linings can cause bone and cartilage erosion leading to joint deformities, activity limitations, joint pain and stiffness, and soft tissue swelling. RA is one of the most serious forms of arthritis.

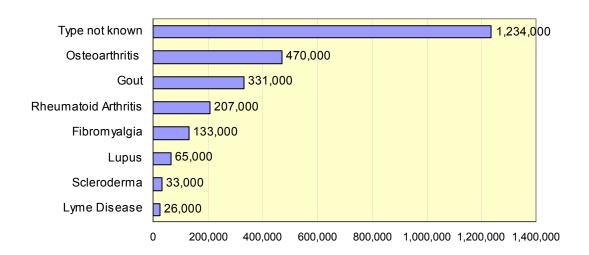
Fibromyalgia is a pain syndrome of the muscles and muscle attachment areas. Common symptoms, in addition to muscle pain, include sleep disorders, fatigue, headaches, irritable bowel syndrome and often depression.

Lupus, or Systemic Lupus Erythematosus (SLE) is a chronic condition that often begins with unexplained fever, fatigue, inflamed joints, sensitivity to sunlight and rashes. In about half of individuals with lupus, severe involvement of the kidneys or nervous system develops.

Scleroderma is a chronic disease of the connective tissue causing thickening and hardening of the skin and, in some cases, of the internal organs. Symptoms of scleroderma include swollen hands, cold hands and feet, joint contractures, difficulty swallowing, shortness of breath and kidney disease.

Lyme Disease is a bacterial infection transmitted by the bite of an infected tick. It may cause a number of medical conditions including arthritis, nerve, or heart problems. Early detection can prevent more serious disease.

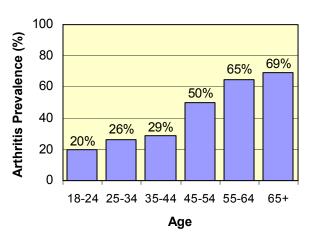
Estimated Number of Michigan Adults with Selected Rheumatic Diseases



Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey 2000-2001

WHO HAS ARTHRITIS?

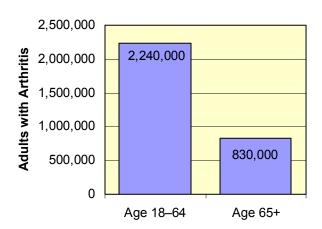
Arthritis Increases with Age



Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey 2000-2001

The prevalence of arthritis increases as age increases. About 20 percent of 18-24 year-olds have arthritis, while 69 percent of people age 65 and older have arthritis.

Almost 3/4 of Adults in Michigan with Arthritis are Under Age 65

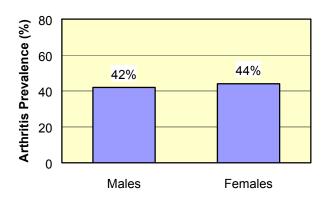


Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey 2000-2001

We usually think of arthritis as a disease of the elderly and it is true that the risk of arthritis increases with age. However, over 70 percent of the Michigan adults with arthritis are under age 65. The estimated number of people below age 65 with arthritis is 2,240,000. The remaining 830,000 adults with arthritis are 65 years or over.

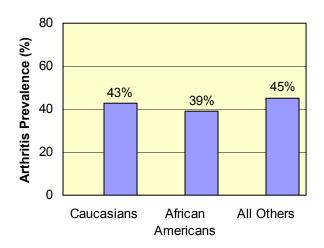
WHO HAS ARTHRITIS?

Males and Females are Equally Likely to Have Arthritis



Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey 2000-2001

Caucasians and African Americans are Equally Likely to Have Arthritis



Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey 2000-2001

In some national surveys, women account for about 60 percent of arthritis cases. In Michigan, men and women appear to be equally likely to have arthritis. More men may have been identified in the Michigan survey (MOABRFS) because respondents were asked specifically whether they had been diagnosed with gout, a disease more common in adult men than in women. This may help explain the nearly equal percentages of men and women who have arthritis in Michigan.

In national surveys, Caucasians are found to be more likely than African Americans to have arthritis. In Michigan, the percentage of adults with arthritis is about the same for Caucasians (43%), African Americans (39%), and all other racial/ethnic categories (45%).

WHO HAS ARTHRITIS?

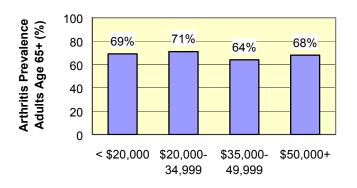
Lower Income Adults Are More Likely to Have Arthritis



Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey 2000-2001

Lower income and less education are associated with arthritis. Adults with less education tend also to have lower income, and both may be associated with less access to health care and with occupations that increase the risk of developing arthritis. In Michigan, 55 percent of adults with income of less than \$20,000 per year have arthritis, compared with 33 percent of adults with income of \$50,000 or more per year.

At Age 65+, All Income Groups Are About Equally Likely to Have Arthritis



Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey 2000-2001

For people age 65 and older, income and education no longer make a difference, and people in all income and education levels are about equally likely to have arthritis.

HOW DOES ARTHRITIS IMPACT MICHIGAN?

Statewide Impact

Arthritis or joint symptoms affect four of every ten Michigan residents — approximately three million people. Despite popular misconceptions, arthritis does not affect only the elderly, nor is it just a normal part of aging. While some forms of arthritis, such as osteoarthritis, are more prevalent among older populations, arthritis is "hurting" many more people than is commonly known:

- Arthritis affects people of all ages, races and classes.
- The majority of those who have arthritis are under the age of 65.3
- Arthritis is the number one cause of disability in the U.S. and among the top causes of disability in Michigan.
- Arthritis and other musculoskeletal conditions were the fifth most common reported occupational disease in Michigan for 2001.⁵
- Approximately 7,000 children in Michigan have juvenile arthritis.⁶
- In the U.S., arthritis results in 750,000 hospitalizations each year and 36 million outpatient visits.³ In Michigan, one in ten hospitalizations is arthritis-related.

Arthritis Hospitalizations in Michigan

One in ten Michigan hospitalizations in 2001 was arthritis-related.

- 2.6 percent of all Michigan hospitalizations recorded in Michigan's Inpatient Hospital Data Base were directly due to arthritis as a primary diagnosis.
- For an additional 8.1 percent of hospitalizations, arthritis was listed among the diagnostic codes.⁷
- Nearly 10,000 Michigan adults had total knee replacements in 2001.⁷
- Over 5,000 Michigan adults had total hip replacements due to osteoarthritis in 2001.

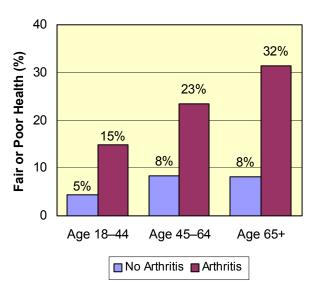
Arthritis and rheumatic diseases not only affect the quality of life for individuals but also have a profound economic impact. In 1997, the total cost of arthritis and other rheumatic conditions in the United States was \$86.2 billion (\$51.5 billion in direct medical costs plus \$35.1 billion in lost wages among people age 18-64) – approximately 1 percent of the US gross domestic product.⁸

Michigan's share of that economic burden \$3.74 billion, with \$2.1 billion in direct medical costs and \$1.5 billion in lost wages.⁸

Cost of Arthritis in Michigan

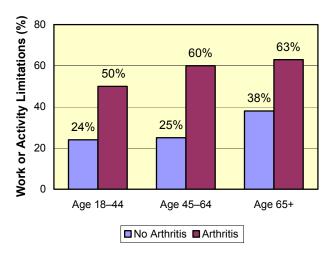
In 1997, the cost of direct medical care for people with arthritis in Michigan was \$2.1 billion. In addition, arthritis resulted in \$1.5 billion of lost wages.⁸

People with Arthritis are More Likely to Report Fair or Poor Health



Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey 2000-2001

People with Arthritis are More Likely to Report Physical Health Interferes with Work or Regular Activities

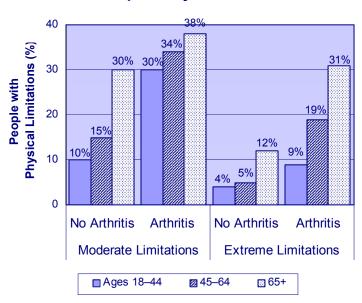


Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey 2000-2001

In all age groups of adults, the majority of survey respondents both with and without arthritis feel that their health is good, very good, or excellent. However, in each age group, people with arthritis are much more likely than people with no arthritis to feel that their health is only fair or poor. Among adults age 18 to 64, people with arthritis are three times more likely than people without arthritis to feel that their health is fair or poor. Among adults age 65 and over, people with arthritis are four times more likely than people without arthritis to feel that their health is fair or poor.

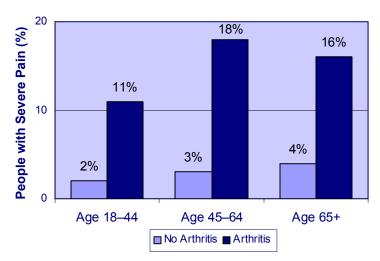
In all age groups of adults, the majority of people without arthritis feel that their physical health does not interfere with their work or regular activities. However, among people with arthritis, physical health interferes with work or regular activities for 50 percent of those age 18-44 years, 60 percent of those age 45-64 years, and 63 percent of those age 65 and over. See Technical Note 4.

People with Arthritis are More Likely to Report Physical Limitations



Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey 2000-2001

People with Arthritis are More Likely than People without Arthritis to Report Severe Pain that Interferes with Work



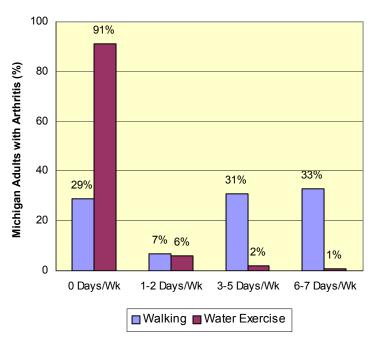
Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey 2000-2001

In each age group of adults, people with arthritis are more likely than people without arthritis to report that their health cases physical limitations. For example, in the 45-64 year old age group, 19 percent of people with arthritis report severe physical limitations (i.e., difficulty in doing normal tasks such as carrying groceries, walking a block, bathing or dressing), compared to only 5 percent of people without arthritis.

Physical limitations increase with age. For people with arthritis age 65 and older, 38 percent report moderate limitations and 31 percent report extreme limitations. Only 31 percent of people with arthritis age 65 and over feel that they have no limitations (data not shown). See Technical Note 5.

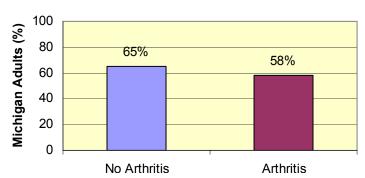
Severe pain that interferes with work is much more likely to be reported by adults with arthritis than by adults without arthritis. People age 45-64 years with arthritis are six times as likely to report severe pain that interferes with work. People age 65 and older with arthritis are four times as likely to report severe pain that interferes with work. See Technical Note 6.

Walking is Common but Water Exercise Is Rare for Adults with Arthritis



Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey 2000-2001

More Than Half of Adults Report 30+ Minutes/Day of Physical Activity



Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey 2000-2001

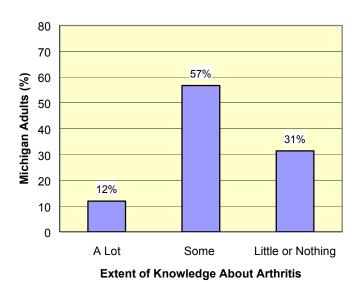
For some people with arthritis, the pain caused by their condition makes it difficult to exercise regularly.

Walking is the most common physical exercise reported among adults with arthritis, with 64 percent walking from three to seven days per week. Water exercise, which is beneficial for people with arthritis, is much less common. Only 9 percent of people with arthritis reported participating in any water exercise for at least 10 minutes at a time. This may be related to the difficulty of finding and traveling to a facility with a pool, particularly during Michigan winters. See Technical Note 7.

When asked about walking, water exercise, and other forms of exercise, adults with arthritis are almost as likely as those with no arthritis to report 30 minutes of physical activity each day. See Technical Note 8.

Physical activity is very important for people with arthritis, since the right type of exercise can help retain mobility, improve physical well-being, and actually reduce pain in the long run. Exercise also helps to maintain proper weight; being overweight can put additional stress on joints.

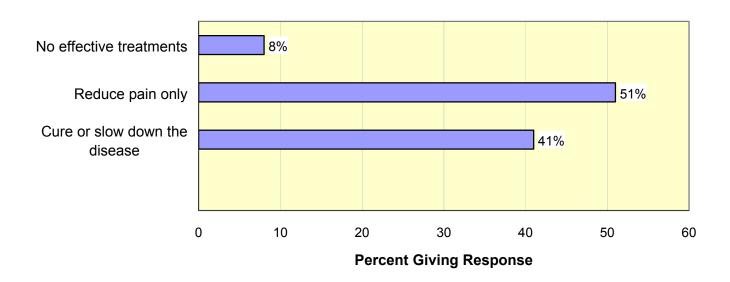
One-Third of Adults Say They Know Little or Nothing About Arthritis



It is clear that more education about arthritis is needed in Michigan. Almost one -third of adults feel that they know little or nothing about arthritis. Even among older adults with arthritis, 16 percent say that they know little or nothing about arthritis (data not shown).

This lack of knowledge extends to the topic of arthritis treatments. One of the most important developments in arthritis treatment in the past decade is the availability of newer medications which, for some forms of arthritis, can slow down or cure the condition. Only 41 percent of adults are aware that there are effective treatments for curing or slowing down the condition.

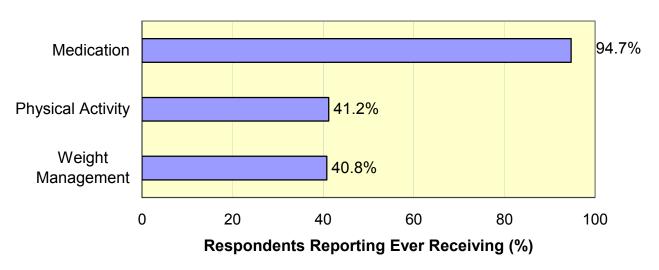
The Majority of Adults Are Not Aware that New Treatments Can Cure or Slow Down Some Forms of Arthritis



Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey 2000-2001

HOW IS ARTHRITIS BEING MANAGED?

Michigan Physicians May Not Be Fully Utilizing Non-Drug Treatments That Could Help



Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey 2000-2001

A critical element in the management of arthritis is appropriate medical treatment. Failure to obtain adequate treatment for arthritis and other rheumatic diseases can lead to undue pain, limited activity, and preventable disability. Numerous treatment options are available today that provide relief from arthritic pain and symptoms. In Michigan, it appears that most physicians are prescribing medications, but may not be fully utilizing other treatments that can enhance quality of life. For example, physical activity has been shown to both reduce pain and improve mobility. However, almost two-thirds of people with arthritis who are currently under a physician's care report that physical activity has never been a part of their treatment. See Technical Note 9.

MICHIGAN ARTHRITIS INITIATIVE

The Michigan Arthritis Action Plan

In 1999, Michigan received \$60,700 from the U.S. Centers for Disease Control and Prevention for reducing the burden of arthritis and other rheumatic conditions. With this modest funding, the Michigan Department of Community Health, in close partnership with the Arthritis Foundation Michigan Chapter and the University of Michigan Rheumatology Program launched the Michigan Arthritis Initiative. The initiative's first product was the *Michigan Arthritis Action Plan*, developed through a strategic planning process over a six-month period in 2000. Hundreds of Michigan citizens were involved: persons with arthritis, physicians, state and national researchers, public health officials, business leaders, and senior citizen program leaders. The plan is a 5-year roadmap for responding to the problem of arthritis in Michigan. Its seventeen recommendations address six areas: (1) creating an infrastructure to address arthritis, (2) programs of intervention, (3) data and research, (4) public awareness and education, (5) education for people with arthritis and their families, (6) communication strategies for health professionals. To implement the Michigan Arthritis Action Plan, an oversight group called the Michigan Arthritis Collaborative Partnership was created in early 2001. Progress has since been made in the following key areas:

Public Health

- Arthritis is now addressed as a significant public health issue among other chronic diseases and conditions at the Michigan Department of Community Health. For the first time ever, a full time employee has been assigned to arthritis in the Michigan Department of Community Health.
- A statewide arthritis behavioral risk factor survey was completed in 2001, and a second cycle of the survey will be initiated in 2004. Accurate data is now available to estimate the self-reported prevalence of arthritis in Michigan.
- A statewide conference was held in 2001 for health care and allied professionals featuring "Emerging Issues in Arthritis, Asthma and Osteoporosis."

Projects of the Michigan Arthritis Collaborative Partnership

- Michigan State University Center for Rural Health has helped organize an annual series of Arthritis Grand Rounds, which are being broadcasted monthly to 14 rural Michigan hospitals.
- The Arthritis Foundation Michigan Chapter completed a statewide survey that identified new sites for arthritis land and water exercise programs.
- Arthritis Foundation programs that improve the quality of life for people with arthritis have been expanded in Michigan. These include the *People with Arthritis Can Exercise (PACE)*, the *Arthritis Foundation Aquatics Program (AFAP)*, the *Arthritis Self Help Course (ASHC)*, and a new program added in 2002, *Tai Chi from the Arthritis Foundation*.

MICHIGAN ARTHRITIS INITIATIVE

New Juvenile Arthritis Initiative

With new state funding for arthritis, a major childhood arthritis initiative has been launched. The program helps health care providers increase their skills in diagnosing, managing and making appropriate referrals for children with arthritis and related diseases. The Arthritis Foundation Michigan Chapter has taken the lead, and has achieved the following:

- A panel of experts was convened to draft a consensus document detailing
 practical steps and strategies for best practice in the diagnosis, treatment, and
 appropriate referral of children with juvenile arthritis. The document, *Critical Elements of Care for Juvenile Arthritis*, has been published and widely distributed
 to more than 5,000 health care provider groups in Michigan.
- Presentations on the Critical Elements of Care for Juvenile Arthritis have been organized for the National Association of Pediatric Nurse Practitioners/Michigan Chapter and the Michigan Academy of Physician Assistants.
- Grand rounds on "An Update on Pediatric Rheumatology" have been initiated for pediatricians and family practitioners at 11 community hospitals since 2001 reaching more than 365 primary care providers.
- Informative articles about childhood arthritis have been published in journals of the Michigan State Medical Society and the Michigan Chapter of the American Academy of Pediatrics.

"It is estimated that 7,000 children in Michigan have some form of childhood arthritis. Only a fraction of these are under the care of a pediatric rheumatologist. We know that with prompt diagnosis and treatment, most of these children can be spared a lifetime of preventable disability."

Barbara Adams, MD, Director of Pediatric Rheumatology

New Connections with Michigan's Aging Network

- Arthritis staff have worked with the state Office of Services to the Aging (OSA) to conduct a Michigan pilot test of the CDC social marketing campaign for midlife adults "Physical Activity: The Arthritis Pain Reliever."
- The Region IV Area Agency on Aging tested the effectiveness of incorporating the Arthritis Self Help Course into routine programming at senior centers and senior nutrition sites.

Arthritis Foundation Michigan Chapter (AF)

The Arthritis Foundation Michigan Chapter has been providing arthritis programs and services to Michigan residents for 55 years. The Arthritis Foundation is the only voluntary health organization in Michigan providing education, resources, and research for people with the 100-plus forms of arthritis and related diseases. It is a gateway for people with arthritis seeking to take control of their conditions.

Information & Referral Services

- A chapter office in Southfield and a regional office in Grand Rapids serve Michigan's 83 counties.
- A toll-free help line (1-800-968-3030) called Arthritis Answers[™] is answered live weekdays from 8:30 a.m.- 4:30 p.m. Messages can be left at others times for a later call-back.
- The National Arthritis Foundation web site (<u>www.arthritis.org</u>) provides links to Michigan-specific program information including class schedules, educational opportunities, and physician referral lists.
- Volunteers help fulfill requests for information and referrals generated by the help line. In 2002, the *Arthritis Answers*™ program answered nearly 6,500 calls.
- Arthritis Today magazine, a health publication filled with information on how to live well with arthritis, is mailed to AF members six times a year.
- The chapter newsletter, Arthritis Action, is sent to Michigan members twice a year.
- A referral list of support groups is maintained for persons with various forms of arthritis.
- Educational books, instructional videos and disease-specific print resources are available.

Exercise & Self-Help Programs

- The Arthritis Foundation Aquatic Program is available at 78 warm water pool sites. The AF has 277 active aquatic leaders.
- The land-based *People with Arthritis Can Exercise* (P.A.C.E.) class is available in 19 different locations. The AF has 35 active P.A.C.E. instructors.
- The *Tai Chi by the Arthritis Foundation* program is available in 4 different locations. In the fall of 2003, the program will be offered in 8 additional locations. The AF has 10 active tai chi leaders.
- Michigan has 66 active *Arthritis Foundation Self-Help Course* leaders and offers an average of 40 ASHC classes each year.
- The Arthritis Awareness Urban Outreach Program offers the *Arthritis Self-Help Course* and at urban churches and service centers in Detroit.

Studies show that arthritis self-management courses can lead to a reduction of pain, depression, and disability.

National Arthritis Action Plan, 1999

Public & Professional Education

- The AF offers ongoing public education. In 2002, 83 speaking presentations by AF staff reached 1,800 people, and 68 educational exhibits reached 21,000 people. Also in 2002, 10 forums featuring health professionals reached 1,500 people.
- Arthritis education programs are regularly offered for health care professional organizations. In 2002, the AF collaborated in 26 professional continuing medical education (CME) programs reaching 2,500 people.
- The AF helps coordinate videoconference continuing medical education programs in Michigan.

Arthritis Foundation Juvenile Arthritis Activities

The AF organizes and facilitates the Juvenile Arthritis Initiative of the Michigan Arthritis Collaborative Partnership. In addition to the activities already described on page 14, the AF provides other programming to help children with arthritis and their families.

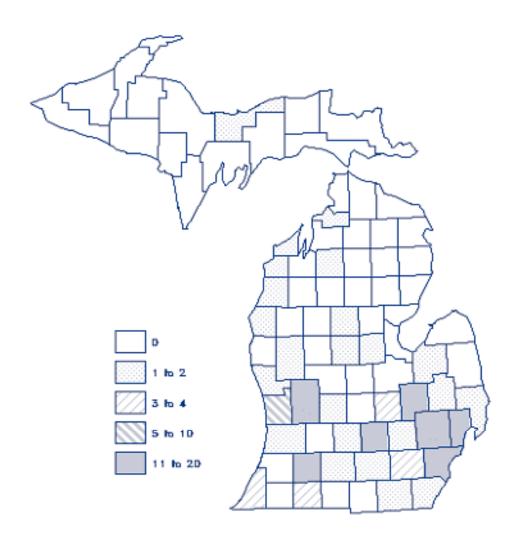
- The AF distributes Juvenile Arthritis information kits to pediatric rheumatologists, school programs and parents of children with juvenile arthritis.
- The AF sponsors families to attend national and regional American Juvenile
 Arthritis Organization (AJAO) conferences each year and provides education and
 support programs for families of children with juvenile arthritis, including a
 summer camp for children with any form of rheumatic disease.
- The AF submits pediatric rheumatology updates to medical professional organizations for publication in their journals and newsletters.

In 2003...

- 9,214 People participated in the Arthritis Foundation Aquatics Program.
 - 387 People participated in Arthritis Self-Help Courses.
 - 968 People participated in the *Arthritis Foundation* land-based exercise program called *People With Arthritis Can Exercise* (P.A.C.E.).
 - 192 People participated in the *Tai Chi by the Arthritis Foundation* program.

Arthritis Exercise Classes*

Number of Leaders per County Michigan

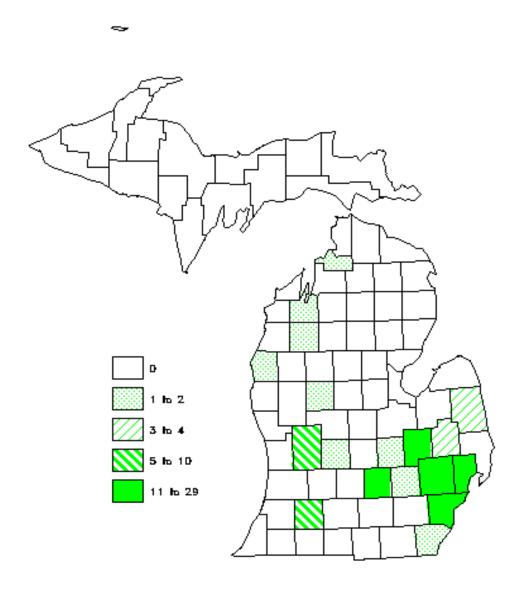


Updated November, 2000

*Includes the *Arthritis Foundation Aquatics Program* (AFAP), held in warm water pools, and the land-based *People with Arthritis Can Exercise* (PACE) Program. For schedule and site information or to bring a program to your community, call the Arthritis Foundation Michigan Chapter, 800-968-3030.

Arthritis Self-Help Course

Number of Classes per County Michigan



Updated November, 2000 For schedule and site information to bring a program to your community, call the Arthritis Foundation Michigan Chapter, 800-968-3030.

University of Michigan Rheumatic Disease Core Center

The University of Michigan Rheumatic Disease Core Center is a multidisciplinary, multidepartmental research and education program funded by the National Institutes of Health. It is responsible for developing state-of-the-art research on musculoskeletal diseases and for treating persons with arthritis. While the center's administration is based in the Department of Internal Medicine Division of Rheumatology, its staff and participants are actively involved in other university departments, schools, and colleges. The center is comprised of 144 staff members and participants – including approximately 128 doctoral-level (Ph.D. or M.D.) senior members – drawn from five schools and colleges, 16 departments, and six divisions.

Biomedical Research

- Major research programs related to arthritis and musculoskeletal diseases have been developed within the education, epidemiology, and health services areas.
- Research proposals focus on understanding the basic mechanisms operative in rheumatoid arthritis, systemic lupus erythematosus, osteoarthritis, and other rheumatic diseases.

Education/Community/Health Services

- Research is conducted in the areas of professional education, health services and epidemiology.
- The center integrates basic scientific advances into the clinical care of patients with rheumatic diseases.
- The center participates in activities of charitable foundations and government.
- The center has entered into a collaborative arrangement with the Arthritis Foundation Michigan Chapter to offer ASHC and PACE classes to patients.

Professional Education and Training

- Training is provided for students, physicians, and allied health professionals.
- A fellowship program prepares M.D.s and Ph.D.s for productive, independent careers in rheumatic-disease-related fields of research such as immunology, biochemistry, or molecular genetics.
- The center oversees clinical rotations in rheumatology for 35 to 40 junior- and senior-year medical students.
- Rheumatology-related lectures, seminars, clinical experience, and laboratories are provided to medical students at all stages of their undergraduate academic careers.
- Internal medicine residents receive training on all the rheumatology clinical services.
- The center provides continuing education for practicing physicians.

University of Michigan Rheumatic Disease Core Center, continued Health Care Services and Facilities

- A rheumatology consultation service is provided for approximately 450 patients per year at the University of Michigan Medical Center and at the Ann Arbor Veteran's Administration Medical Center.
- Patients are also treated at the Ambulatory Clinic. Last year, there were over 13,000 patient visits to the clinic.

ARTHRITIS RESOURCES

STATE OF MICHIGAN:

MICHIGAN DEPARTMENT OF COMMUNITY **HEALTH, DIVISION OF CHRONIC DISEASE AND** INJURY CONTROL

Provides leadership for statewide arthritis initiatives. Manages CDC arthritis grant and coordinates activities of the Michigan Arthritis Collaborative Partnership. 517-335-9554

www.michigan.gov/mdch On left-hand column, click on: 1) Physical Health and Prevention, 2) Prevention, and 3) Arthritis

OFFICE OF SERVICES TO THE AGING

Offers numerous services/programs for seniors statewide. To locate the nearest Area Agency on Aging or senior center, search the Web site or call: 517-373-8230

www.miseniors.net

CHILDREN WITH SPECIAL NEEDS FUND

Provides support for children with special health care needs not met through other public health care programs.

Family Phone Line: 800-359-3722

www.michigan.gov/mdch On left-hand column, click on: 1) Pregnant Women, Children and Families 2) Children and Families, and 3) Children with Special Needs Fund.

FOUNDATIONS:

ARTHRITIS FOUNDATION

Provides education, programs, resources and research for persons with arthritis and their families. Also participates in the coordination of arthritis continuing education for health professionals.

800-968-3030 or 248-424-9001

www.arthritis.org Enter Zip code for Michigan activities.

LUPUS ALLIANCE

Provides educational resources and information for persons with lupus, their families and health professionals. Hosts support groups, conferences, and lectures.

800-705-6677

www.milupus.org

SCLERODERMA FOUNDATION

Offers educational information and resources for persons with scleroderma and their families. Sponsors support groups, conferences and lectures. 800-716-6554

www.scleroderma.org/chapter/michigan

UNIVERSITIES:

UNIVERSITY OF MICHIGAN HEALTHCARE SYSTEM, DIVISION OF RHEUMATOLOGY

Conducts arthritis research. Provides community and professional arthritis education as well as a residency program in rheumatology. Offers rheumatology healthcare services on- and off-site.

Rheumatology: 734-936-9539

Pediatric Rheumatology: 734-764-2224

http://www.med.umich.edu/intmed/ Search under

divisions for rheumatology.

WAYNE STATE UNIVERSITY. **DIVISION OF RHEUMATOLOGY**

Offers a residency program in rheumatology and provides rheumatology health care services at its clinical site.

Academic Office: 313-577-1133, Clinic: 313-966-7159

Pediatric Rheumatology: 313-745-4450

www.intmed.wavne.edu

MICHIGAN STATE UNIVERSITY, COLLEGE OF **HUMAN MEDICINE, CHILD HEALTH CARE CLINIC**

In collaboration with the University of Michigan, Michigan State University offers a pediatric rheumatology satellite clinic twice a month at its clinical center. The clinic provides rheumatologic care for children with arthritis as well as educational services for their families. 517-353-3003

MICHIGAN STATE UNIVERSITY, KALAMAZOO **CENTER FOR MEDICAL STUDIES** PEDIATRIC RHEUMATOLOGY CLINIC

Pediatric rheumatology satellite clinic located in Kalamazoo, Michigan. 269-337-6400

MICHIGAN ORGANIZATIONS:

MICHIGAN ARTHRITIS COLLABORATIVE PARTNERSHIP (MACP)

Oversees implementation of the Michigan Arthritis Action Plan (MAAP). Conducts ongoing arthritis education and public awareness campaigns statewide. 517-335-9554

www.michiganarthritisconnection.org

GOVERNORS COUNCIL ON PHYSICAL FITNESS, HEALTH AND SPORTS / THE MICHIGAN FITNESS FOUNDATION

Publishes papers and consumer educational materials on arthritis prevention for sports injuries. 800-434-8642

www.michiganfitness.org

MICHIGAN ASSOCIATION OF SENIOR CENTERS

Provides a membership list of Michigan senior centers, some of which offer arthritis programming. (616) 355-5151

www.webmasc.org/checkusout.htm

MICHIGAN HEALTH AND HOSPITAL **ASSOCIATION**

Offers a listing of Michigan hospitals with links to many of their Web sites. Selected hospitals offer community education and/or programming suitable for people with arthritis.

517-323-3443

www.mha.org

ARTHRITIS RESOURCES

MICHIGAN CENTER FOR RURAL HEALTH

Coordinates video teleconferencing of rheumatology grand rounds in Michigan hospitals for doctors, nurses and allied health professionals. 517-355-7979

www.com.msu.edu/micrh

PROFESSIONAL ORGANIZATIONS:

MICHIGAN RHEUMATISM SOCIETY

Professional organization for rheumatologists in Michigan.

734-647-9000

MICHIGAN PHYSICAL THERAPY ASSOCIATION

Statewide professional organization for physical therapists.

517-347-0880

www.mpta.com

MICHIGAN OCCUPATIONAL THERAPY **ASSOCIATION (MI-OTA)**

Statewide professional organization for occupational therapists.

(734) 677-1417

www.mi-ota.com

MICHIGAN WEB SITE RESOURCES:

MICHIGAN SELF-HELP CLEARINGHOUSE (Now Michigan Protection and Advocacy Service, Inc.)

Lists support groups for persons with arthritis and fibromyalgia by county.

www.mpas.org/MSHC1.asp

HEALTH ALLIANCE PLAN

Online directory of exercise and arthritis fitness classes in Michigan.

http://www.hap.org/healthy_living/classes/exercise.php

UNIVERSITY OF MICHIGAN HEALTH EDUCATION RESOURCE CENTER

Offers capability to access the University of Michigan's comprehensive health information library and provides links to arthritis-related Web sites.

www.med.umich.edu/mfit/herc

COMPREHENSIVE ARTHRITIS RECOVERY & EDUCATION (C.A.R.E.) PROGRAM

A network of health care providers and community leaders in southeast Michigan dedicated to comprehensive arthritis care. Online resources include traditional and alternative treatment components. http://www.advancedortho.net/pages/loniewski.htm

NATIONAL WEB SITES:

ARTRHITIS FOUNDATION

www.arthritis.org

NATIONAL LIBRARY OF MEDICINE/NATIONAL INSTITUTES OF HEALTH

www.nlm.nih.gov/medlineplus/arthritis.html

AMERICAN COLLEGE OF RHEUMATOLOGY

www.rheumatology.org

OFFICE OF ALTERNATIVE MEDICINE, NATIONAL **INSTITUTES OF HEALTH**

http://nccam.nih.gov/

CENTERS FOR DISEASE CONTROL AND **PREVENTION**

www.cdc.gov

NEW YORK ONLINE ACCESS TO HEALTH www.noah-health.org

UNIVERSITY OF MARYLAND SCHOOL OF

MEDICINE, PROGRAM IN COMPLEMENTARY MEDICINE

http://www.compmed.umm.edu/

JUVENILE ARTHRITIS RESOURCES:

AMERICAN JUVENILE ARTHRITIS ORGANIZATION (AJAO)

A council of the Arthritis Foundation devoted to serving the needs of children, teens and young adults with rheumatic diseases and their families. 800-968-3030 or 800-283-7800 www.arthritis.org

AMERICAN ACADEMY OF PEDIATRICS

An organization of pediatricians dedicated to the health, safety and well being of all infants, children, adolescents and young adults. Provides general information, resources and referrals related to child health. 847-434-4000

www.aap.org

This resource list is provided for information purposes only. Any resources or Web sites listed are not official endorsements of programs or services. We encourage all persons with arthritis to carefully weigh and discuss any decisions about treatments with their health care providers.

References

- 1) Centers for Disease Control and Prevention (CDC), Arthritis Foundation, and Association of State and Territorial Health Officials. (1999). *National Arthritis Action Plan: A Public Health Strategy*. Atlanta, Georgia: Arthritis Foundation and Centers for Disease Control and Prevention.
- 2) Michigan Department of Community Health. (2001). *Michigan Osteoporosis and Arthritis Behavioral Risk Factor Survey (MOABRS)*. Lansing, MI: Michigan Department of Community Health.
- 3) CDC. (2003). Targeting Arthritis: The Nation's Leading Cause of Disability. Retrieved July, 2003 from the World Wide Web: www.cdc.gov/nccdphp/aag/aag arthritis.htm
- 4) CDC. (2001). Prevalence of disabilities and associated health conditions among adults United States, 1999. *Morbidity and Mortality Weekly Report (MMWR), 50* (7) 120-125.
- 5) Reilly, M.J., Rosenman, K.D., and Kalinowski, D.J. *Summary of 2001 Occupational Disease Reports to the Michigan Department of Consumer and Industry Services.* July 25, 2001
- 6) Cassidy, J. (1982). Data on Prevalence of Arthritis in Children. *Textbook on Pediatric Rheumatology* (pp. 17-18). New York: John Wiley & Sons. (Estimate calculated using the 2000 Michigan Census for the number of children under age 18.)
- 7) Michigan Department of Community Health. (2001). *Michigan Resident Inpatient File*. [Electronic Data File]. Lansing, MI: Michigan Department of Community Health.
- 8) CDC. (2003) Direct and indirect costs of arthritis and other rheumatic conditions United States, 1997. Morbidity and Mortality Weekly Report MMWR), 52(46) 1124-1126. Figures adjusted in MMWR (March 2004).
- 9) Michigan Department of Community Health. (2001). *Michigan Arthritis Action Plan* Lansing, MI: Michigan Department of Community Health. Available at http://www.michigan.gov. Search on "Arthritis Action Plan."

Technical Notes

The Survey. The Michigan Osteoporosis and Arthritis Risk Factor Survey (MOABRFS) was
modeled after the national Behavioral Risk Factor Survey of the U.S. Centers for Disease Control
and Prevention (CDC). Conducted between 2000 and 2001, MOABRFS was a random digitdialed telephone survey of English-speaking, noninstitutionalized Michigan adults 18 years and
older.

It was developed by consultants with the Michigan Department of Community Health, incorporating wherever possible validated questions used in national surveys. The survey was conducted by the Institute for Public Policy and Social Research at Michigan State University. Its aim was to provide Michigan-specific, population-based estimates of the self-reported prevalence of arthritis and other rheumatic conditions, and to learn more regarding what people understand about arthritis. From those who report arthritis symptoms, this survey documents a profile of treatment, functional limitations, physical activities, and the risk of bone loss.

A total of 2,208 interviews were conducted over a twelve-month period. The survey was conducted using two separate samples but the identical questionnaire. In the general population portion of the survey, 1,108 interviews were completed among adults aged 18 and older. In the second portion of the survey, 1,100 interviews were conducted among women 50 years and older (using a random sample of telephone numbers and an initial screening protocol to select women of this age group). Data from the two samples were then combined and estimates were weighted to adjust for the probabilities of selection (based on the probability of telephone number selection, the number of adults in the household, and the number of residential phone lines). A post-stratification weighting factor was also applied, which adjusted for the gender, race, and age distribution of the Michigan population based on the 2000 U. S. Census. Calculations of the prevalence estimates were performed using SUDAAN, a statistical computing program that was designed for analyzing data from multistage sample surveys.

2. Prevalence of Arthritis. In this report a person was classified as having arthritis if he or she met at least one of the following criteria: (1) Responded "yes" to the questions, "During the past 12 months, have you had pain, aching, stiffness, or swelling in or around a joint?" and "Were these symptoms present on most days for at least one month?" (2) Responded "yes" to the question "Have you ever been told by a doctor that you have arthritis?" (3) Responded "yes" when asked, "Has a doctor ever told you that you have any of the following conditions: gout, lupus, fibromyalgia, scleroderma, rheumatism, or Lyme disease?"

The Michigan prevalence of arthritis generated by the MOABRFS is slightly higher than the Michigan prevalence reported by the CDC based on the national BRFS because the CDC-generated estimate did not include those identified through criterion 3, above.

These estimates are the first statewide survey data on arthritis and rheumatic disease prevalence in Michigan. It is important to keep in mind that they are subject to error for several reasons. (1) Information is based on self-reported data obtained during a telephone interview and, although respondents were asked if they had been told by a physician whether they had arthritis or other rheumatic diseases, their responses have

not been verified with clinical evidence. (2) The estimates do not include people who do not go to doctors or who may have undiagnosed arthritis or rheumatic disease. (3) The accuracy of the responses is subject to respondent recall and to the accuracy of the diagnosis. (4) The estimate includes people with joint symptoms but no diagnosis of arthritis. (5) This survey samples non-institutionalized adults with telephones and therefore does not represent adults who are institutionalized or without residential phones. (6) Respondents were permitted one response for each question, which may result in underestimates of arthritis or rheumatic diseases.

3. **Estimated Number of Michigan Adults with Selected Rheumatic Diseases**The estimated number of people with selected rheumatic diseases was derived from two MOABRFS questions: (1) "What type of arthritis did the doctor say you have?" (respondents were not prompted) and (2) "There are some other conditions that are considered arthritis which you may not have considered. Has your doctor ever told you that you have any of the following conditions: gout, lupus, fibromyalgia, scleroderma, rheumatism, or Lyme disease?"

People were included in the "Type not known" category if they gave any of the following responses to Questions 1 or 2: rheumatism, crippling arthritis, general arthritis, other arthritis, arthritis in a particular body part, can't recall, doctor didn't say what type, don't know, or refused.

4. **Health Interferes with Work.** Respondents were classified as feeling that their physical health interfered with work or regular activities based on their responses to the Role Physical subscale of the SF-36[®] Health Survey¹:

"Still thinking about the past 4 weeks, as a result of your physical health,

- Did you cut down the amount of time you spent on work or other regular daily activities?
- Did you accomplish less than you would like?
- Were you limited in the kind of work or other regular daily activities you could do?
- Did you have difficulty performing work or other regular daily activities? (for example, it took extra effort)."

The judgment that physical health interfered with work or other activities was made if the standardized score for this subscale was 0-75.

5. **Physical Limitations.** Respondents were classified as having moderate or extreme limitations based on their responses to the Functional Limitations subscale of the SF-36[®] Health Survey:

"I am going to read you a list of activities you might do during a typical day. I am interested in finding out whether your health now limits you in these activities. For each activity, please tell me whether you are limited a lot, a little, or not limited at all.

- Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf.
- Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports.
- Lifting or carrying groceries
- Climbing one flight of stairs.
- Climbing several flights of stairs.

-

¹ http://www.sf-36.org

- Bending, kneeling, or stooping.
- Walking one block.
- Walking several blocks.
- Walking more than a mile.
- Bathing or dressing yourself."

Individuals were judged to have moderate limitations if their standardized score on this subscale was 41-80. Individuals with score of 0-40 were judged to have extreme limitations in their physical functioning, with difficulty in doing normal tasks such as carrying groceries, walking a block, bathing or dressing. There were 402 adults in the survey who were classified as having extreme functional limitations.

- 6. **Pain.** Respondents were classified as having severe pain that interferes with work based on their responses to the two-item Pain Index subscale of the SF-36[®] Health Survey:
 - "How much bodily pain have you had during the past 4 weeks?
 - During the past 4 weeks how much did pain interfere with your normal work, both around the home and outside the home?"
- 7. **Types of Physical Activity.** Since walking and water exercise are generally feasible for people with arthritis, respondents were asked specifically about these two activities in the interview section on physical activity. "In a usual week, do you walk for at least ten minutes at a time while you are not working?" If the respondent said yes, he or she was asked "How many days a week do you walk for at least ten minutes at a time?" "In a usual week, do you do any type of water exercises such as swimming or water aerobics for at least ten minutes at a time? How many days a week do you do these water exercises?
- 8. Amount of Physical Activity. For this report, adults were categorized as meeting the current minimum recommendation for physical activity (30 minutes per day). Estimates of total amounts of physical activity are based on a series of questions about physical activities. "For the next series of questions, I am going to ask you about physical activities you do when you are not at work. Please include physical activities you do for recreation, exercise, to get to and from places, while working around the house, or for other reasons." Respondent were asked specifically about walking, water exercises, and up to three additional activities. For each activity they were asked whether in a usual week they did the activity for at least ten minutes; if so, how many days a week did they do it for at least ten minutes; and on days when they did it, how much total time did they spend doing it? Based on responses to these questions, the average number of minutes of physical activity per day was calculated for each person.
- 9. **Arthritis Treatments:** Data on arthritis treatment was obtained from respondents who reported that they had been told by a doctor that they had arthritis or rheumatic disease, and who also reported that they were currently under treatment (approximately 40 percent said they were currently being treated). Respondents who were currently being treated by a physician for arthritis or other rheumatic conditions were read "a list of things that could be part of the treatment for joint pain or arthritis." For each treatment, they were asked, "if it has ever been part of your treatment." Potential treatments included physical therapy; occupational therapy; joint replacement surgery; joint splinting; medication; weight loss or management; physical activity, water exercises or other exercise classes. Respondents were also asked whether a doctor had recommended any other treatments.





Jennifer M. Granholm, Governor Janet Olszewski, Director

MDCH is an equal opportunity employer, services and program provider. 1,500 printed at \$0.881 each with a total cost of \$1,322.05